Urologia Internationalis

Letter to the Editor

Urol Int 2021;105:726–728
DOI: 10.1159/000512895

Received: September 15, 2020
Accepted: November 9, 2020
Published online: February 24, 2021

Effect of Coronavirus Disease 2019 on Patients with Bladder Cancer in China

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Keywords
Bladder cancer · Progression · Hematuria · Telehealth · Coronavirus disease 2019

Dear Editor,

The coronavirus disease-2019 (COVID-19) pandemic in early 2020 has caused great global damage to healthcare systems. The Chinese government announced a stop to travel in and out of Wuhan, Hubei Province, on January 23, 2020, to control the spread of the virus. As of July 14, 2020, the number of confirmed cases globally has increased to 12,964,809 [1]. Defeating COVID-19 requires joint efforts worldwide.

Hematuria often occurs as an early symptom of bladder cancer. However, most people do not pay attention to this early warning sign, especially during a pandemic. Here, we demonstrate the effect of COVID-19 on patients with bladder cancer in China.

We collected information on patients with hematuria or suspected bladder tumors in the Urology Department of our hospital from January to May in 2019 and 2020. Data of patients hospitalized are summarized in Table 1, and patients with cystoscope are summarized in Table 2.

A total of 180 patients in 2019 and 155 patients in 2020 were included in this analysis. In 2020, the number of patients with recurrence increased ($p = 0.027$) and high-grade urothelial carcinoma accounted for more cases ($p = 0.044$). The number of patients who underwent radical cystectomy was significantly higher than that in 2019 ($p = 0.039$). The average weekly number of cystoscopies in 2020 decreased significantly ($p = 0.001$).

Cystoscopy visits decreased because of the strict management of hospital visits and patients refusing invasive tests. However, cystoscopy is essential for bladder disease, especially early time. Deferred diagnosis and treatment can risk to tumor progression and recurrence [2]. We propose that patients seek help from doctors in time if symptoms occur, such as hematuria and urinary frequency. However, patients should not forget to practice self-protection during the pandemic period.

The degree of tumor invasion affects whether conservative methods are adopted. In our hospital, more patients chose radical cystectomy in 2020. This may result from cancer progression. However, the final method depends on the patient's own decision. Considering the demand for regular intravesical instillations of chemother-

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Table 1. Data of patients hospitalized

	2019, $n = 180$	2020, $n = 155$	p value
Gender, *n* (%)			
Male	146 (81.1)	119 (76.8)	0.330
Female	34 (18.9)	36 (23.2)	
Age, years	64.49±12.49	63.67±12.46	0.547
Home address, *n* (%)			
Nanjing	70 (38.9)	51 (32.9)	0.255
Outside-Nanjing	110 (61.1)	104 (67.1)	
New/recurrence, *n* (%)			
New	121 (67.2)	86 (55.5)	0.027
Recurrence	59 (32.8)	69 (44.5)	
Treatment,[a]*n* (%)			
TURBT	121 (82.3)	92 (71.9)	0.039
RC	26 (17.7)	36 (28.1)	
Patients with operation			
Time from admission to first operation, days	4.54±2.85	4.50±2.80	0.890
Days in hospital, days	9.19±6.78	8.78±5.34	0.571
Pathological grade, *n* (%)			
UMLMP	10 (8.7)	2 (1.9)	0.044
Low-grade urothelial carcinoma	43 (37.4)	36 (33.3)	
High-grade urothelial carcinoma	62 (53.9)	70 (64.8)	
Pathological staging in RC patients, *n* (%)			
Muscle invasive	19 (65.5)	22 (59.5)	0.615
Nonmuscle invasive	10 (34.5)	15 (40.5)	
Pathological staging in RC patients without NAC, *n* (%)			
Muscle invasive	15 (60)	22 (61.1)	0.930
Nonmuscle invasive	10 (40)	14 (38.9)	
Operations average week, *n*	7.85±3.86	7.44±3.11	0.725
TURBT average week, *n*	6.20±2.93	5.17±1.79	0.204
RC average week, *n*	1.45±1.32	2.06±1.73	0.230

TURBT, transurethral resection of bladder tumor; RC, radical cystectomy; UMLMP, urothelial neoplasm of malignant potential; NAC, neoadjuvant chemotherapy. [a] Treatment: this data was only compared between TURBT and RC.

Table 2. Data of patients with cystoscope

	2019, $n = 568$	2020, $n = 338$	p value
Gender, *n* (%)			
Male	409 (72.0)	250 (74.0)	0.522
Female	159 (28.0)	88 (26.0)	
Age, years	61.82±13.87	62.30±13.31	0.610
Biopsy rate, %	25.7 (146/568)	22.5 (76/338)	0.276
Positive rate of biopsy, %	45.9 (67/146)	55.3 (42/76)	0.185
Hospitalization rate, %	8.3 (47/568)	10.9 (37/338)	0.180
Cystoscope average week, *n*			
From January to May	31.56±8.71	17.79±13.09	0.001
From January to March	30.33±8.22	9.80±8.46	<0.001
From March to May	33.23±8.25	24.00±11.08	0.024

apy drugs after transurethral resection of bladder tumors, patients are reluctant to visit hospitals repeatedly during this stressful period.

Bladder cancer requires long-term monitoring. Our department began online consultations since early March. A study shows 84.7% of patients prefer online consultations because this virus may do damage to human urogenital system [3]. Up to now, COVID-19 pandemic is still urgent abroad, and it may even last until 2025 [4]. The AGILE group in Italy demonstrates that it is even a decrease in patients with urgent urological treatment [5]. Thus, it is important to conduct telehealth and integrate it into traditional medical treatment, which is conducive to establishing a hierarchical medical system. However, the process of telehealth is too complicated for old patients to adopt. Simplifying the process and increasing promotion of it may be more useful for the elderly. For urologists, EAU20 has gone virtual this summer, which encourages urologists to adapt to online learning, as well as to telehealth.

Finally, we hope doctors pay attention to patients visiting with visible hematuria after the pandemic. It is possible that bladder cancer was not detected and that early symptoms were ignored during the pandemic.

Conflict of Interest Statement

The authors have no conflicts of interest to declare.

Funding Sources

This work was supported by the National Natural Science Foundation of China (Grant Nos. 81772711, 82073306, and 82072832), Jiangsu Province's Key Provincial Talents Program (ZDRCA2016006).

Author Contributions

Q. Lu and P.C. Li have given substantial contributions to the conception or the design of the manuscript, all authors to acquisition, analysis, and interpretation of the data, and X. Yang, J.T. Zhuang, and H. Yu to statistical analysis. X. Yang, J.T. Zhuang, H. Yu, and Q. Cao have participated to drafting the manuscript. Q. Lu and P.C. Li revised it critically. All authors read and approved the final version of the manuscript.

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